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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
097074,474	05/07/98	BROOME	8998

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EXAMINER

CHU, K

ART UNIT

PAPER NUMBER

2752

DATE MAILED: 08/31/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/074,474

Applicant
Broome, et al.

Examiner
Kim-Kwok CHU

Group Art Unit
2752



☒ Responsive to communication(s) filed on election filed on 5/20/1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire Three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-12 is/are pending in the application

Of the above, claim(s) 11 and 12 is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Restriction/Election

1. Applicant elected Group I, claims 1-10. Applicant should canceled claims 11 and 12.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in claim 1, line 5, the term "a cover plate" is not clear. Applicant should define what is a cover plate and its function on the disks; and

(b) similarly, in claim 6, lines 5 and 6, the term "a cover plate" is not clear. Applicant should define what is a cover plate and its function on the disks.

4. The claims not specifically mentioned above are indefinite based upon their dependence.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

6. Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Kajiyama et al. (U.S. Patent 5,777,970).

Kajiyama teaches an optical disk reader having all of the elements and means as recited in claim 1. For example, Kajiyama teaches the following:

(a) said disk system capable of operating in either a compact disk 7 and a digital versatile disk 70 (Fig. 1; column 5, lines 1-20);

(b) disk support drive means having a drive plate (inherent feature of a disk reader);

(c) a first laser diode 1 with a first wavelength (Fig. 1; column 5, lines 22-23);

(d) a second laser diode 10 with a second wavelength (Fig. 1; column 5, lines 25-26);

(e) optical means 4 for directing light beams of said laser diodes (Fig. 1);

(f) an objective lens 6 (Fig. 1);

(g) said objective lens 6 having a central aperture zone of a first numerical aperture for confining an output beam of said first laser source 1 (Fig. 1);

(h) said objective lens 6 having an outer aperture zone of a second numerical aperture for confining an output beam of said second laser source 10 (Fig. 1); and

(i) said objective lens having surfaces of an aspheric profile (Fig. 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiyama et al. (U.S. Patent 5,77,970).

Kajiyama teaches a disk reader system very similar to that of the instant invention.

However, Kajiyama does not teach the following:

(a) said objective lens is molded cyclic olefin copolymer or PMMA;

(b) said objective lens has numerical aperture 0.45 for the central aperture zone; and

(c) said objective lens has numerical aperture 0.6 for the outer aperture zone.

It is well known that objective lens with aspheric surfaces are molded with copolymer materials such as applicant's. In other words, although Kajiyama does not disclose the material of his objective lens, for the motivation of molding a lens, it would have been obvious to one of ordinary skill in the art to use materials such as cyclic olefin copolymer or PMMA similar to applicant's.

On the other hand, even if Kajiyama does not use applicant's lens materials, an objective lens molded with cyclic olefin copolymer or PMMA is not novel and using said materials are considered optional design choice because it depends on which material is best formed for the objective lens.

As such, it would have been an obvious design choice to customize the material to make an objective lens as the applicant has not disclosed that any specific material overcomes any deficiency in the prior art or as for any stated purpose.

Furthermore, the numerical apertures of applicant's objective lens are not novel. It depends on which material and what shapes the objective lens is formed so that it can focused properly. As such, it would have been an obvious design choice to customize the numerical apertures as the applicant has not disclosed that his specific numerical apertures of 0.45 and 0.6 overcome any deficiency in the prior art or as for any stated purpose.

Allowable Subject Matter

9. Claims 2-4, 7, 8 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

For an optical head having two laser sources for reading two different disks, applicant claims said optical head having an objective lens with an central aperture zone and outer aperture zone where said objective lens also has diffractive means.

The prior art does not teach or fairly suggest the features as recited in applicant's claims.

11. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee et al. (5,933,401) is pertinent because Lee teaches an optical head having two laser lights and two disks with different thicknesses.

Choi (5,883,874) is pertinent because Choi teaches an optical head for disks with different thicknesses.

Chung et al. (5,870,369) is pertinent because Chung teaches an objective lens having two zones.

Shimozono et al. (5,835,473) is pertinent because Shimozono teaches an objective lens focus light beams on two disks with different thicknesses.

Yagi (5,808,999) is pertinent because Yagi teaches an objective lens having aspheric surfaces.

13. Any response to this action should be mailed to:
Commissioner of Patents and Trademarks Washington, D.C.

20231

or faxed to:

(703) 305-9051, (for formal communications intended for entry)

Or:


(703) 305-9731, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (703) 305-3032.

KE 8/27/99


ALI NEYZARI
PRIMARY EXAMINER
8-30-99

Kim-kwok CHU
Examiner AU2752
August 27, 1999

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